CLAIMS

1. Method for the closed-loop speed control of an internal combustion engine (2), in which a first filtered actual speed (nM1(IST)) is computed from an actual speed (nM(IST)) of the internal combustion engine (2) by means of a first filter (12), a first control deviation (dR1) is computed from a set speed (nM(SL)) of the internal combustion engine (2) and the first filtered actual speed (nM1(IST)), and a power-determining signal (ve) for automatically controlling the speed of the internal combustion engine (2) is determined from the first control deviation (dR1) by means of a speed controller (11), characterized by the fact that a second filtered actual speed (nM2(IST)) is computed from the actual speed (nM(IST)) of the internal combustion engine (2) by means of a second filter (13), a second control deviation (dR2) is computed from the set speed (nM(SL)) and the second filtered actual speed (nM2(IST)), and, when a dynamic change of state occurs, the power-determining signal (ve) for the closed-loop speed control of the internal combustion engine is computed by the speed controller (11) from the first control deviation (dR1) and the second control deviation (dR2).

2. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 1, characterized by the fact that the dynamic change in state is detected by means of the second control deviation (dR2).

3. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 1, characterized by the fact that the filter angle of the second filter (13) is smaller than the filter angle of the first filter (12).

4. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 2, characterized by the fact that the second control deviation (dR2) acts on a P component (15) of the speed controller (11).

Express Label No.
EV343679671US

5. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 4, characterized by the fact that the P component (15) is determined from the first control deviation (dR1), a first factor (kp1), and a second factor (kp2), with the second factor (kp2) being computed from the second control deviation (dR2) by means of a characteristic curve (14).

6. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 5, characterized by the fact that the P component is additionally computed from the second control deviation (dR2).

7. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 5 or Claim 6, characterized by the fact that the first factor (kp1) is either preset as a constant or computed as a function of the first filtered speed (nM1(IST)) and/or an I component (ve(I)).

8. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 2, characterized by the fact that the second control deviation (dR2) acts on a DT1 component (17) of the speed controller (11).

9. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 8, characterized by the fact that the DT1 component (17) is determined from the second control deviation (dR2) by means of a characteristic curve (19).

10. Method for the closed-loop speed control of an internal combustion engine (2) in accordance with Claim 9, characterized by the fact that the DT1 component (17) is deactivated by means of the characteristic curve (19) if the second control deviation (dR2) becomes smaller than a first limiting value (GW1) ($dR2 < GW1$), and the DT1 component is activated by means of the characteristic curve (19) if the second control deviation (dR2) becomes greater than a

Express Label No.
EV343679671US

second limiting value (GW2) (dR2 > GW2).